

T04D06 – (4.5) Physical Properties of Bonding

Name.....

1. 4.5.1 Compare and explain the properties of substances resulting from different types of bonding. (3)

- a. Complete the following table for properties of each type of bonding:

Type of Bonding	Metallic	Giant Covalent	Simple Molecular	Ionic
Examples				
Composition				
Nature of Bonding				
Physical State at STP				
Hardness				
Melting Point				
Conductivity (molten)				
Solubility				

- b. Solubility:

- i. For a material to be soluble, it must go through a process of dissolution. Describe each step:

- 1.
- 2.
- 3.

- ii. Solubility is more likely if the overall enthalpy change is exothermic:

- iii. What general rule can be followed for the solubility of liquid covalent compounds:

- iv. Discuss the solubility of Gases

- c. Describe and Illustrate why Ionic compounds are considered to be brittle:

- d. Discuss the conductivity of ionic compounds: